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basic imagery interpretation report

Kazan Airframe Plant
Gorbunov 22 (S)

STRATEGIC WEAPONS INDUSTRIAL FACILITIES

25X1

USSR

Secret

WNINTEL

Z-14583/82
RCA-09/0009/82
June 1982
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INSTALLATION OR ACTIVITY NAME					COUNTRY
Kazan Airframe Plant Gorbonov 22 Kazan Airfield North					UR
UTM COORDINATES	GEOGRAPHIC COORDINATES	CATEGORY	BE NO.	COMIREX NO.	NIETR NO.
NA	55-51-37N 049-06-57E 55-51-58N 049-07-57E				

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MAP REFERENCE

DMAAC. USATC, Series 200, 5th ed., Sheet 0165-1, scale 1:200,000

LATEST IMAGERY USED	NEGATION DATE (If required)
	NA

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ABSTRACT

1. (S/WN) This report discusses activity at Kazan Airframe Plant Gorbunov 22, USSR, from [redacted] and updates a previous NPIC report [redacted] This report also discusses activity at Kazan Airfield North, the test and flyaway field for the plant.

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2. (S/WN) Significant construction, most of which was still underway on the information cutoff date for the reporting period, will increase the plant floorspace by 259,000 square meters to a total of 659,000 square meters. Most of the new floorspace is contained in the large assembly building under construction.

3. (S/WN) Kazan Airframe Plant Gorbunov 22 is the only known assembly facility for the TU-22M (BACKFIRE B) variable-geometry-wing medium bomber and the BACKFIRE C (formerly B Modified). The IL-62 (CLASSIC) transport aircraft is also assembled at Kazan 22.

4. (S/WN) This report includes a location map, five annotated photographs, and three tables of mensural and/or chronological data. The numbering system in this report supersedes the one used previously.

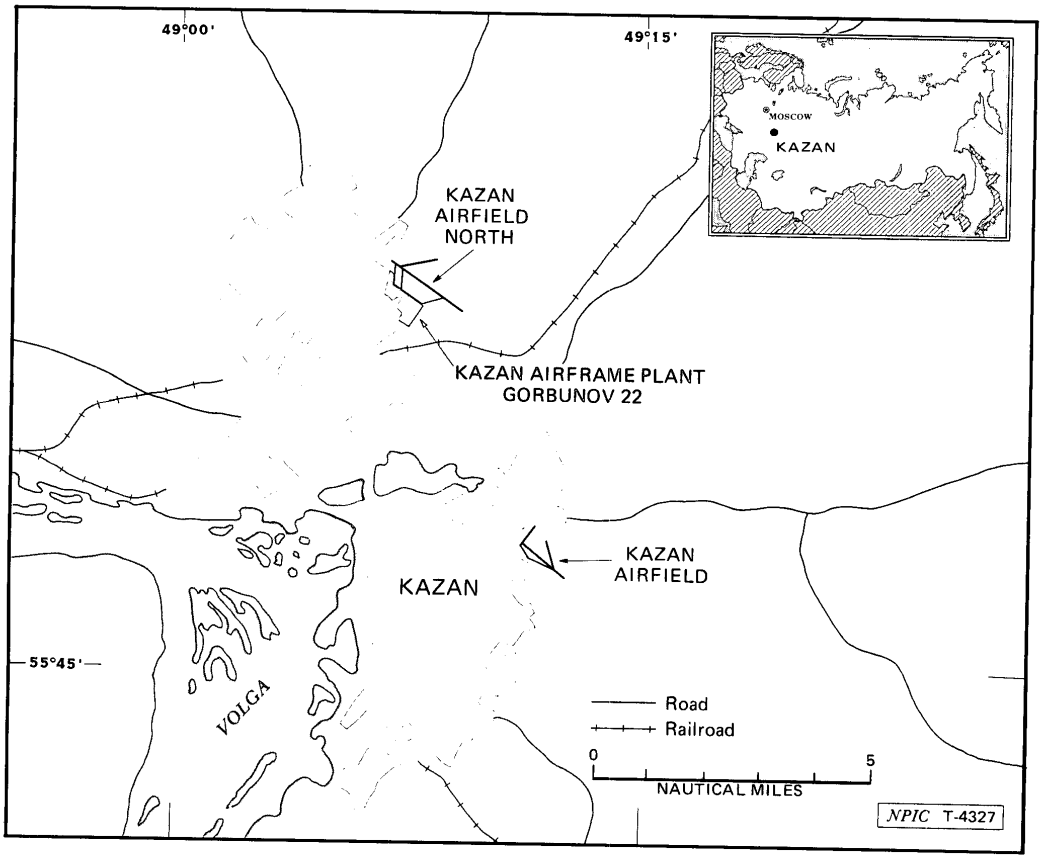

FIGURE 1. LOCATION OF KAZAN AIRFRAME PLANT GORBUNOV 22 AND KAZAN AIRFIELD NORTH, USSR

BASIC DESCRIPTION

Construction

5. (S/WN) During the reporting period, construction at Kazan 22 and its associated airfield (Figures 1 and 2) was largely production-related. This was also the case in the period covered by the previous report.[1] The large assembly building on the eastern side of the north plant area (item 63, Table 1 and Figures 3 and 4), still under construction on [redacted] accounted for 252,000 square meters of the new floorspace. Three new buildings and an addition to an existing building account for the remaining 7,200 square meters of new floorspace (Figure 3). The following paragraphs present a detailed chronology of construction between [redacted] 25X1

6. (S/WN) Between [redacted] only one building and an addition to another building were completed. A shop/support building (item 26, Table 1 and Figure 3) was completed by [redacted] and a shop addition to a workshop (item 62b) was completed by [redacted] A shop and a storage building containing 1,122 square meters of floorspace were razed in 1980 (Figure 3). 25X1

7. (S/WN) Three buildings were still under construction on [redacted]—the new assembly building (item 63, Table 1 and Figures 3 and 4), a storage/support building (item 8, Table 1 and Figure 3), and a storage building (item 74). Roofing was underway on all new sections of the new assembly building. The 25X1

[redacted] 25X1

two large doors on the assembly building each measure 46 meters wide by 21 meters high (Figure 4). Also, an excavation whose purpose has yet to be determined had been dug at the rear of the engineering/shop section of the new assembly building (item 63p, Table 1).

8. (S/WN) With new construction, including buildings still under construction, the plant as of [redacted] contained 497,923 square meters of production-related floorspace, 93,869 square meters of direct-support floorspace and 67,474 square meters of general-purpose floorspace. On a percentage basis, approximately 76 percent was production-related, 14 percent was direct support, and 10 percent was general-purpose. 25X1 25X1

Miscellaneous Construction

9. (S/WN) East of the interior taxiway, construction of three parking hardstands was underway by [redacted] (Figure 3). Recent grading indicated that a fourth parking hardstand may be under construction. These hardstands will improve the parking area where small and medium transports such as CURL and CAMP are usually observed. In addition, grading and ditching for probable drainage has been initiated along the eastern plant perimeter (Figure 3). The area annotated New Construction Area in the last report,[1] is probably related to Kazan Aircraft Engine Plant 16. Two roads from this area now connect directly with Plant 16. This area will no longer be reported as part of Kazan 22. 25X1 25X1

Production Activity

BACKFIRE B

10. (S/[redacted] Kazan 22 is the only known airframe assembly facility for the BACKFIRE B, a Tupolev-designed, variable-geometry-wing bomber. For 1980 and 1981, production was estimated at approximately 30 BACKFIRE aircraft per year.[2] The actual monthly rollout rate of the BACKFIRE B has varied widely, however, because of the increase in production of the BACKFIRE C (formerly called B Modified) which occurred during this period. Table 2 lists representative sightings of BACKFIRE B at the plant from June 1980 through February 1982. It demonstrates the probable decrease in production activity related to the standard BACKFIRE B from December 1980 through February 1981, when as few as two BACKFIRE B were observed. During this same period, an upsurge in BACKFIRE C rollouts occurred. Deliveries of the BACKFIRE B to Soviet Air Force and Naval Aviation bases have continued, with 23 or 24 delivered in both 1980 and 1981[3]. 25X1

11. (S/WN) The unidentified shipping containers (Types 1 and 2) which have been observed at both Kazan and Komsomolsk Airframe Plant 126 [redacted] since 1978[1] continued to be observed at both facilities. While both types may be BACKFIRE-related, no photographic evidence has yet confirmed this. 25X1

BACKFIRE C

12. (S/WN) Two milestones in the BACKFIRE C program occurred in 1981: the first delivery to a training base and the first deployment to an operational base. On [redacted] a BACKFIRE C was at Ryazan/Dyagilevo Airfield [redacted], the Soviet Air Force strategic bomber training base. This was the first observation of a BACKFIRE C outside test and production centers, and it presaged eventual deployment to an operational base. On [redacted] two BACKFIRE C were at Poltava Airfield [redacted] Two BACKFIRE C had departed the Kazan plant between [redacted] 25X1 25X1 25X1 25X1

13. (S/WN) Prior to these first deployments, BACKFIRE C rollouts increased dramatically from December 1980 through February 1981 (Table 3). However, despite this increase in activity, the average number produced during both 1980 and 1981 remained at about six aircraft.

14. (S/WN) Since the first identification of the BACKFIRE C, the reasons for the reconfigured engine inlets have been in question. It has been postulated that the reconfiguration was to accommodate a new or modified engine, and it was further speculated that the new engine was the new Kolesov engine which had been retrofitted to the CHARGER supersonic transport, another Tupolev-designed aircraft.[4] However, on [redacted] high-resolution imagery of a BACKFIRE C about to undergo engine emplacement indicated that these engines were dimensionally similar to the standard BACKFIRE engine (Figure 5). The engines measured approximately [redacted] with a diameter of [redacted] the standard NK-144 measures approximately [redacted] The Kolesov engine would probably be considerably smaller as it is shipped in a container which measures only [redacted] while the [redacted] NK-144 requires an [redacted] shipping container. However, the possibility remains that the BACKFIRE C engines, while probably not the new Kolesov engine, may be modified or new. 25X1 25X1 25X1 25X1 25X1 25X1

CLASSIC

15. (S/WN) The Ilyushin-designed IL-62M (CLASSIC) is also being assembled at Kazan 22. Numbers of the aircraft at the plant varied between zero and six. Bort numbers visible during the period were as

[redacted] 25X1

Table 1.
Mensural and Chronological Data
Kazan Airframe Plant Gorbunov 22, USSR
(Items keyed to Figure 3)

This table in its entirety is classified SECRET/WNINTEL

Item	Function	Dimensions (m) L	W	H	Floorspace (sq m) Total	Sections	Date Observed Complete	Remarks
1	Shop/stor bldg							
2	Shop/stor bldg							
3	Admin/shop bldg							2 stories
4	Elec power substation							
5	Shop bldg							
6	Shop bldg							
7	Spt bldg							2 stories
8	Stor/spt bldg							Midstage of construction as of [redacted]
9	Warehouse							
10	Warehouse							
11	Stor bldg							
12	Workshop							2 stories
13	Stor bldg							
14	Admin bldg							
15	Shop/stor bldg							
16	Prob shop bldg							
17	Stor bldg							
18	Stor bldg							
19	Lab/engr bldg							3 stories
20	Shop/spt bldg							
21	Stor/spt bldg							
22	Admin/engr bldg							
23	Workshop							
24	Pumphouse							
25	Workshop							
26	Shop/spt bldg							
a	Shop/spt sec							
b	Admin sec							2 stories
27	Prob dining hall							
28	Stor/spt bldg							
29	Stor bldg							
30	Warehouse							
31	Stor/spt bldg							
32	Spt bldg							
33	Spt bldg							
34	Machine shop							
35	Foundry							
36	Workshop							
37	Quonset-type stor bldg							
38	Shop bldg							
39	Forge/foundry bldg							
40	Stor bldg							
41	Admin bldg							2 stories
42	Admin bldg							2 stories
43	Stor/spt bldg							
44	Stor bldg							
45	Stor/spt bldg							2 stories
46	Spt bldg							Construction completion date approximate
47	Stor/spt bldg							
48	Stor bldg							
49	Stor/spt bldg							
50	Subassem bldg							
51	Stor bldg							
52	Stor/spt bldg							
53	Stor bldg							
54	Stor bldg							
55	Stor bldg							
56	Workshop							
a	Shop sec							
b	Admin/engr sec							Part of section 2 stories, constructed 1971
c	Shop sec							
57	Spt bldg							
58	Assem bldg							
a	Original assem bldg							
b	Additions							
59	Warehouse							
60	Machine shop							
61	Machine shop							2 stories
62	Workshop							2 stories
a	Shop sec							
b	Shop addition							2 stories
63	Assem bldg							Floorspace figure tentative (figure 4)
a	Admin/engr sec							7 stories
b	Admin/engr sec							7 stories
c	Connecting sec							2 stories
d	Connecting sec							2 stories
e	Prob shop/spt sec							2 stories; will extend entire length of bldg
f	Assem/subassem sec							
g	Engr/shop sec							5 stories
h	Assem/subassem sec							
i	Assem/subassem sec							
j	Engr/shop sec							multistory
k	Assem/subassem sec							
l	Assem/subassem sec							Midstages of construction as of [redacted]
m	Engr/shop sec							Multistory; will be at least 3 stories
n	Assem/subassem sec							Late stage of construction as of [redacted]
p	Engr/shop sec							5 stories; late stage of construction as of [redacted]
q	Assem/subassem sec							Late stage of construction as of [redacted]
64	Workshop							
65	Shop bldg							
66	Stor bldg							
67	Stor bldg							
68	Stor bldg							
69	Stor bldg							
70	Transshipment bldg							
71	Warehouse							
72	Shop bldg							
73	Warehouse/shop bldg							
a	Admin sec							4 stories
b	Shop/stor sec							2 stories
74	Stor bldg							As of [redacted]
75	Vehicle maint bldg							
76	Control bldg							
77	Hangar							May be paint hangar
78	Spt bldg							
79	Quonset-type stor bldg							
80	Admin bldg							2 stories; airfield-related
81	Flt ops bldg							
82	Admin bldg							
83	Stor/spt bldg							
84	Engr bldg							
85	Hangar							
86	Quonset-type stor bldg							
87	Quonset-type stor bldg							
88	Quonset-type stor bldg							
89	Workshop							
90	Workshop							
91	Spt bldg							
Total floorspace as of [redacted]								

*Horizontal measurements are accurate to within [redacted] and vertical measurements are accurate to within [redacted]

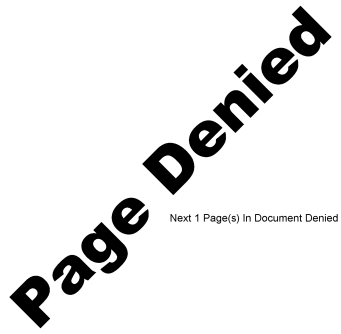

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Table 2.
Representative Observations of BACKFIRE B and BACKFIRE C Aircraft at Kazan 22
June 1980—February 1982

(This table in its entirety is classified SECRET/WNINTEL)

Date	BACKFIRE B	BACKFIRE C
	6	6
	8	6
	10	7
	8	7
	5	7
	8	8
	3	9
	5	12
	2	13
	6	10
	7	8
	7	10
	7	9
	7	10
	6	10
	6	8
	5	8
	3	9
	6	8
	6	8
	7	8
	6	8
	7	8
	6	8
	3	9
	7	5
	12	4

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Table 3.
Production History of the BACKFIRE C at Kazan 22

(This table in its entirety is classified SECRET/WNINTEL)

No Observed	Date Rollout Observed	Cumulative Total	Time Between Rollouts (months)
1		1	
1*		1	
1		2	
2		3	1.0
3		4	2.5
4		5	2.0
5		6	3.0
6**		7	2.5
6***		8	2.0
6		9	4.0
7		10	2.0
8		11	3.0
9		12	1.0
12		15	0.6
13		16	0.3
9+		17	4.0
9		18	4.0
9		19	4.0
First C at Ramenkoye, burned May 1978 +		1	
Total		20	

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* C observed on [ ] may have been the one observed on [ ] & prob departed in Dec for Ramenskoye FTC; a C never seen at Kazan was already observed at Ramenskoye in Aug 77

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** Rollout time is approx because of imagery interpretability; a C had flown to Akhtubinsk FTC by Dec 79

*** A 2nd C departed Kazan & arrived at Akhtubinsk by [ ]

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\+ Around Mar 81, 1st C deployment was reflected by drop in number observed at plant

16. (S/WN) CLASSIC aircraft modified for satellite communications were observed repeatedly. On numerous coverages since [redacted] a uniquely configured CLASSIC modified for satellite communications was at the plant (Figure 6). This aircraft was unpainted and had a two-toned raised area on the dorsal spine in the same position as the raised area on the standard CLASSIC modified for satellite communications. The lighter-toned area was [redacted] and appeared to be higher than the darker-toned area. The light-toned area extended from just forward of the leading edge of the wing to forward of the aft edge of the wing root. A CLASSIC modified for satellite communications which appeared to be similar has been at Ramenskoye Flight Test Center (FTC; [redacted] 25X1 25X1 25X1

REFERENCES

IMAGERY

(S/WN) All applicable imagery acquired from [redacted] was used in the preparation of this report. 25X1

MAPS OR CHARTS

DMAAC. US Air Target Chart, Series 200, Sheet 0165-1, 5th ed, Jun 76, scale 1:200,000 (SECRET)

DOCUMENTS

1. NPIC. [redacted] RCA-09/0028/80, *Kazan Airframe Plant Gorbunov 22 (S)*, Sep 80 (TOP SECRET/ [redacted] 25X1 25X1
2. DIA. [redacted] DDB-1923-2-81-SAO, *Foreign Aircraft Production (FOAP) Communist World (U)*, Jun 81 (TOP SECRET [redacted] 25X1 25X1
3. DIA. DIN 35-5A, USSR: 1981 *BACKFIRE Production (U) 050345Z*, 4 Feb 82 (SECRET [redacted] 25X1
4. DIA. DST-2660P-107-81-SAO, *Trends and Developments, Foreign Technology Weapons and Systems (U)*, 30 Nov 81 (TOP SECRET [redacted] 25X1

*Extracted information is classified SECRET/WNINTEL.

RELATED DOCUMENTS

NPIC. [redacted] RCA-09/0017/69, *Kazan Airframe Plant Gorbunov 22 (S)*, Jan 69 (TOP SECRET/- [redacted] 25X1 25X1

NPIC. [redacted] RCA-09/0013/76, *Kazan Airframe Plant Gorbunov 22 (S)*, Jan 76 (TOP SECRET/- [redacted] 25X1 25X1

NPIC. [redacted] RCA-09/0012/78, *Kazan Airframe Plant Gorbunov 22 (S)*, Jun 78 (TOP SECRET [redacted] 25X1 25X1

REQUIREMENTS

COMIREX J02
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(S) Comments and queries regarding this report are welcome. They may be directed to [redacted] Warsaw Pact Forces Division, Imagery Exploitation Group, NPIC, [redacted] 25X1 25X1

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